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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,035	02/27/2002	Robert Kincaid	1001011076-1	6480

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EXAMINER

SMITH, CAROLYN L

ART UNIT

PAPER NUMBER

1631

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/087,035	KINCAID, ROBERT	
	Examiner	Art Unit	
	Carolyn L Smith	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 17-21, 29 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 22-28 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1 page</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's elections with traverse of Group I (claims 1-16 and 22-28) and Specie A (array design in which customer revision of data is doable), filed 7/7/04, are acknowledged. Claims 17-21 and 29-30 are withdrawn from consideration as being drawn to non-elected Groups.

Applicant's traversal is on the grounds that the MPEP allows an Examiner to examine otherwise patentably distinct sets of claims if no undue burden is imposed. Applicant states that many elements of Groups II, III, and IV are also found in Group I, such that little additional searching would be required to search these additional groups.

The applicant's request to rejoin all Groups into one invention was found unpersuasive because of the following reasons (summarized from the restriction paper):

The invention groups were shown to be distinct as they are related as products and processes of use. Divergent subject matter is grounds for different searches that illustrate the undue search burden if all groups were searched together.

The requirements are still deemed proper and are therefore made FINAL.

The information disclosure statement, filed 2/27/02, has been considered by the Examiner.

Claims herein under examination are 1-16 and 22-28.

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Specification

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code, such as on page 13 (lines 5-20) and page 20 (lines 8-9).

Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Objections

Claim 1 is objected to because of the following minor informality: “customer selected” and “customer-selected” in lines 3 and 5 are inconsistent regarding the presence or absence of a hyphen. Appropriate correction is requested.

Claims Rejected Under 35 U.S.C. § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 and 22-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Claims 1 (line 5), 10 (line 2), 12 (line 6), 15 (line 2), 22 (line 8), 23 (line 8), 24 (line 2), and 28 (line 2) recite the phrase “according to” which is vague and indefinite. It is unclear what criteria and to what degree these criteria must be met to be considered “according to”.

Clarification of the metes and bounds of these claims via clearer claim wording is requested.

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Claims 2-9, 11, 13-14, 16, and 25-26 are also rejected due to their direct or indirect dependency from claims 1, 12, and 23.

Claims 1 (lines 5-6), 4-7 (line 2 of each), 9 (line 3) 10-11 (line 2 of each), 12 (lines 3 and 6-7), 14 (line 3), 15-16 (line 2 of each), 22 (lines 8-9), and 23 (lines 8-9) recite the phrases “said customer selected array design parameters” and/or “said vendor provided array design parameters” lacks clear antecedent basis. For example, claim 1, step (a), recites “at least one design parameter” which means there can either be only one design parameter or more than one parameter. It is unclear if Applicants intend to exclude the single parameter possibility (“at least one”) from the last step in these claims. For example, as currently stated in claim 1, the design in step (d) must contain more than one customer selected array design parameter and more than one vendor provided array design parameter, such that step (d) lacks completing a design if only one of each parameter was selected. A similar issue is in claim 12 (line 3) where only one of the “at least one” parameters is provided so that multiple selected parameters would be excluded. Similar issues appear in the other claims listed above. Clarification of the metes and bounds of the claim via clearer claim wording is required. Claims 2-3, 8, 13, and 24-26 are rejected along with claims 1, 12, and 23 due to their direct or indirect dependence.

Claim 4 recites the phrase “said array” which lacks clear antecedent basis. Claim 4 depends from claim 1 that recites array design but not an array itself. Clarification of the metes and bounds of this claim via clearer claim wording is requested. Claims 5-7 are also rejected due to their direct or indirect dependency from claim 4.

Claims 9 and 14 recite the phrase “based on” which is vague and indefinite. It is unclear what criteria and to what degree these criteria must be met to be considered to be “based on”.

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Clarification of the metes and bounds of these claims via clearer claim wording is requested.

Claims 10-11 and 15-16 are also rejected due to their direct or indirect dependency from claims 9 and 14.

Claim 27 (lines 3-9) recite the phrase “said gene of interest” which lacks clear antecedent basis. Line 2 of this claim recites “at least one gene of interest”, so that it is unclear if Applicants intend to exclude the participation of more than one gene of interest from steps (b) through (e) of this claim since only a single gene is recited in these steps. Clarification of the metes and bounds of this claim via clearer claim wording is requested. Claim 28 is also rejected due to its direct dependency from claim 27.

Claim 28 recites the phrase “said complete array design” which lacks clear antecedent basis. Claim 28 depends from claim 27 that recites array design in the preamble; however, no mention is made of an array design that is complete. Clarification of the metes and bounds of this claim via clearer claim wording is requested.

Claim Rejections – 35 USC §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-16 and 22-28 are rejected under 35 U.S.C. 102(e)(1) as being anticipated by Zhou et al. (US 2003/0120432 A1).

The priority date relied upon for the above mentioned patent application publication come from provisional applications.

Copies of the provisional applications are not included with this Office action, because the copies could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a substantial delay by the Office in fulfilling the order for the copy of the provisional application. Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge does not apply.

Zhou et al. disclose a method for generating a custom probe array design wherein a system receives user-selected identifiers (array design parameters) (abstract), as stated in instant claims 1, 6, 22, and 25. Zhou et al. disclose using remote vendor business systems and servers (Figure 4, #404 and paragraph 0134), as stated in instant claims 1, 2, 12, 22, 23, and 27. Zhou et al. disclose the system (vendor) enabling a number of users to share space on an array or enabling a number of users to share in ordering portions of a lot of catalog probe arrays for economical benefit (paragraph 0006), which represents the vendor providing at least one

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additional array design parameter including probe selection as well as layout parameters, as stated in instant claims 1, 5, 12, 23, 26, and 27. Zhou et al. disclose the user may select geographic dispersion of probe sets (paragraph 0009) which represents a customer selected array design layout parameter, as stated in instant claim 5. Zhou et al. disclose using a probe set with controls, as stated in instant claim 7. Figure 14 shows a graphical user interface for providing options and design selections (paragraph 0039), as stated in instant claims 8 and 13. Figure 15 shows a graphical user interface for providing one or more custom probe array designs or probe set designs (layouts) (paragraph 0040), as stated in instant claims 9 and 14. Zhou et al. disclose receiving probe set identifiers that identify potential probes and verifying probe sets of verified probes (paragraph 0007), which represents some probe selection by a vendor, as stated in instant claim 26 and 27. Zhou et al. disclose displaying the custom probe array design to the user via graphical user interface and receives a user selection specifying acceptance, modification, or rejection of the design (abstract), as stated in instant claims 10, 11, 15, and 16. The user acceptance of array design represents completion of the design by the vendor, as stated in instant claim 2. The user modification of the design represents completion of the array design by the customer, as stated in instant claim 3. Zhou et al. disclose providing the user with the accepted or modified custom probe array (abstract). Zhou et al. disclose using a database application for associating probe sets with corresponding genes or ESTs (Figure 2 #230) which represents gene-based parameter selections, as stated in instant claim 4. Zhou et al. disclose researchers using microarrays to determine which genes are expressed in certain cells or organs, extracting biological information, and designing follow-up experiments (paragraph 0004). Zhou et al. disclose the probe set identifiers may be selected by the user from a predetermined list where

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each item may correspond to an EST, gene, splice variant, or protein (paragraph 0009) which represents selecting at least one gene of interest and probe parameter for said gene, as stated in instant claims 23 and 27. Zhou et al. disclose systems, methods, and computer program products to address these needs, such as allowing the user to select probe identifiers that may be associated with probe sets of one or more probes that are capable of detecting genes of interest, which are then correlated with data and/or products to be provided to the user (paragraph 0006), as stated in instant claim 27. Figures 7A and 10 show displaying and providing genomic data, sequence data, expression data, and various other forms of information to the user (paragraphs 0030 and 0034), as stated in instant claim 27. Zhou et al. disclose synthesizing probes on a substrate (paragraph 0090), as stated in instant claims 24 and 28. Zhou et al. disclose selecting substrate material or design and synthesized probe arrays (paragraph 0010), as stated in instant claims 24 and 28. Zhou et al. disclose constructing probe arrays to detect or measure one or any combination of biological information including gene expression, genotype, cells, cellular membranes, and organelles (paragraph 0007) which represents an in situ array, as stated in instant claims 24 and 28.

Thus, Zhou et al. anticipate the instant invention.

Conclusion

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform to the notices published in the

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Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR §1.6(d)). The CM1 Fax Center number is (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn Smith, whose telephone number is (571) 272-0721. The examiner can normally be reached Monday through Thursday from 8 A.M. to 6:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (571) 272-0722.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner Tina Plunkett whose telephone number is (571) 272-0549 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

September 1, 2004

Ardin H. Marschel 9/16/04
ARDIN H. MARSCHEL
PRIMARY EXAMINER